

3.1 more on derivatives

people	prob
0	0
5	.027
5	.117
10	.253
15	.411
20	.569
25	

lists & spreadsheet



data & statistics

people	prob	dx	dy	dy/dx = $\frac{dy}{dx}$
		1/n		

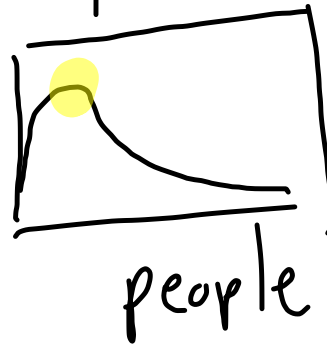
formula
cell

$$dx = \text{delta list}(\text{people})$$

$$dy := \text{delta list}(\text{prob})$$

$$\frac{dy}{dx}$$

$$\frac{\text{prob}}{\text{people}}$$



Hw 1-4, 5-12

$$\text{def } f'(a) = \lim_{h \rightarrow 0} \frac{f(a+h) - f(a)}{h}$$

$$x_1 = a$$

$$y_1 = f(a)$$

$$x_2 = a+h$$

$$y_2 = f(a+h)$$

derivative

(slope of tan)

$$y_2 - y_1$$

$$x_2 - x_1$$

$$7. \quad f(x) = \sqrt{x+1}$$

$$x_1 = 3 \quad y_1 = 2$$

find $f'(3)$

(slope of tan line
at $x=3$)

$$x_2 = 3+h \quad y_2 = \sqrt{3+h+1}$$

$$y_2 = \sqrt{4+h}$$

$$\lim_{h \rightarrow 0} \frac{(\sqrt{4+h} - 2)(\sqrt{4+h} + 2)}{h(\sqrt{4+h} + 2)}$$